TASK-1

import re

# Define patterns and corresponding responses

patterns = {

r'\b(hi|hello|hey)\b': "Hello! How can I assist you today?",

r'\b(what\s\*is\s\*your\s\*name)\b': "My name is Claude.",

r'\b(how\s\*are\s\*you)\b': "I'm doing well, thank you for asking!",

r'\b(weather)\b': "Unfortunately, I don't have access to real-time weather information.",

r'\b(joke)\b': "Why don't scientists trust atoms? Because they make up everything!",

r'\b(bye|exit)\b': "Goodbye! Have a great day.",

}

# Define a default response for unmatched inputs

default\_response = "I'm sorry, I didn't understand that. Could you please rephrase or ask something else?"

def respond(user\_input):

for pattern, response in patterns.items():

if re.search(pattern, user\_input, re.IGNORECASE):

return response

return default\_response

# Main loop

print("Welcome to the chatbot! Type 'bye' or 'exit' to quit.")

while True:

user\_input = input("> ")

response = respond(user\_input)

print(response)

if response == "Goodbye! Have a great day.":

break